1   **RANGE-BASED CACHE CONTROL SYSTEM AND METHOD**

2   **ABSTRACT OF THE DISCLOSURE**

3   The present invention relates to disk drive having a cache control system that generates

4   scan results that permit response to a host command using existing cached data having a logical

5   block address (LBA) range that overlaps a host command LBA range. The cache control system

6   forms variable length segments of memory clusters in a cache memory for caching disk data in

7   contiguous LBA ranges. The cached LBA ranges are scanned for segments having LBA ranges

8   overlapping with an LBA range of a host command. The cache control system is effective in

9   exploiting any existing overlapping cache data.